

## Chapter 9: Energy Conservation and Efficiency

For additional data related to energy efficiency and conservation, please refer to the *Kansas Energy Chart Book*, Chapter 9 ([http://kec.kansas.gov/chart\\_book/](http://kec.kansas.gov/chart_book/)).

### **GOAL: Facilitate cost-effective energy conservation in the public, residential, commercial, and industrial sectors.**

Reducing demand for energy through conservation and efficiency improvements is an essential component of a comprehensive, long-range strategy to meet the state's future energy needs.

#### **Topic / Issue Description**

Nationally, consumption of electricity is on the rise. According to the North American Electric Reliability Council (NERC), U.S. demand for electricity is expected to increase 20 percent from 2006 to 2015.<sup>1</sup> Demand for electricity in July and August of 2006 reached record levels.<sup>2</sup>

In Kansas, electric utility customers used 37,022,066 megawatthours in 2004, the most recent year for which we have data.<sup>3</sup> The state's demand for electricity is predicted to climb by about 2.5 percent annually over the next 10 years. In response to this projected increase in demand, many of the state's utilities have plans to build additional coal-fired power plants.

On the natural gas side, the statewide demand has declined in recent years in response to higher prices. In 2003, the state's consumption of natural gas was 281,346,000 Mcf, a 7.8 percent decrease from 2002 levels, and demand is expected to decline by about 2.0 percent annually through 2009.<sup>4</sup>

All Kansans may benefit from reducing the demand for energy through energy conservation efforts. Reduced demand puts downward pressure on all energy-related prices and defers such energy-related costs as investment in new power plants and extraction equipment. It also reduces health and environmental costs related to the energy-related emission of pollutants and greenhouse gases. And, finally, energy conservation by individual ratepayers can provide them with lower monthly utility bills.

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<sup>1</sup> Wall Street Journal, October 16, 2006: U.S. Electricity Demand is Outpacing New Resources, Report Warns, Rebecca Smith.

<sup>2</sup> Wall Street Journal, October 16, 2006: Less Power to the People: Ten innovations that will reduce the amount of energy we consume, Rebecca Smith.

<sup>3</sup> Energy Information Administration web site: [http://www.eia.doe.gov/cneaf/electricity/esr/esr\\_sum.html](http://www.eia.doe.gov/cneaf/electricity/esr/esr_sum.html), Electric Sales, Revenue, and Price, Table 10 (accessed October 23, 2006).

<sup>4</sup> Kansas Energy Council, 2005, Kansas Energy Report 2006, Appendix 3 (PDF available online: <http://www.kec.kansas.gov/reports.htm>).

Many new and existing Kansas buildings are deficient in cost-effective energy conservation measures (e.g., attic and wall insulation, efficient HVAC systems), resulting in excessive energy use and, consequently, excessive utility bills year round. Cost-effective energy conservation measures—such as upgrading attic insulation to at least R-38 or installing an Energy Star qualified furnace—can reduce energy usage by as much as 20 percent,<sup>5</sup> while providing dollar savings as well. Increased adoption of these measures statewide can have a significant impact on energy consumption in Kansas.

### **Existing Policies and Programs**

1. K.S.A. 66-1227 adopts the International Energy Conservation Code 2003 (IECC 2003) as the applicable thermal efficiency standard for new commercial and industrial structures in Kansas; the law also states that the “state corporation commission has no authority to adopt or enforce energy efficiency standards for residential, commercial, or industrial structures.”
2. K.S.A. 66-1228 requires the builder or seller of a new home to disclose to prospective buyers, upon request or at closing, information regarding the thermal efficiency of the structure using a form outlined in the statute. The timing of the disclosure and the absence of specific information on the disclosure form undermine its effectiveness in informing buyers about the energy efficiency of new houses.
3. Current federal law provides tax credits for homeowners who install certain energy efficiency and conservation measures; however, the credits are set to expire at the end of 2008.
4. Energy Star is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE). In 1992 the EPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. Computers and monitors were the first products to be labeled. Through 1995, EPA expanded the label to additional office equipment products and residential heating and cooling equipment. In 1996, EPA partnered with the DOE for particular product categories. The Energy Star label is now on major appliances, office equipment, lighting, home electronics, and more. EPA has also extended the label to cover new homes and commercial and industrial buildings.

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<sup>5</sup> U.S. EPA and DOE Energy Star web site: [http://www.energystar.gov/index.cfm?c=heat\\_cool.pr\\_hvac](http://www.energystar.gov/index.cfm?c=heat_cool.pr_hvac) and [http://www.energystar.gov/index.cfm?c=home\\_sealing.hm\\_improvement\\_sealing](http://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_sealing) (accessed October 23, 2006).

5. Statewide, a number of municipalities and at least one county have adopted ordinances addressing, to varying degrees, energy efficiency and conservation in residential structures. Several Kansas cities have adopted the International Residential Code (IRC), which addresses energy efficiency in Chapter 11. Three cities (Fairway, Leawood, and Overland Park) have adopted either the 2000 or 2003 version of the International Energy Conservation Code (IECC).<sup>6</sup> To ensure public safety, the City of Hays in 1995 established building codes on combustion safety and ventilation air. A partnership with Midwest Energy was established to help implement these codes and has led to significant improvements in safety and energy efficiency in new residential construction.
6. The Division of Facilities Management in the Kansas Department of Administration has adopted the 2003 International Energy Conservation Code (IECC) as its standard for all new state-owned facilities. Compliance with these standards will be a contractual requirement and will be enforced by the Division of Facilities Management.
7. Several Kansas utilities offer energy conservation services to their customers, including energy audits and rebates for heating systems, water heaters, and appliances. For example, Midwest Energy has been offering audits since the 1980s and, in response to the 1995 adoption of stronger building codes by the City of Hays, developed a program of energy conservation services for its residential and small commercial customers to improve the safety of structures and, possibly, their energy use. In addition to audits, Midwest Energy offers blower door tests, residential energy ratings, guidance related to HVAC (Heating, Ventilation, and Air Conditioning) sizing, infrared scanning, and suggested lighting design.<sup>7</sup> Some services are partially financed by modest customer fees, with the remainder of the costs covered by the utility and passed along to all ratepayers (resulting in about a 10- to 15-cent increase on monthly bills). Based on a survey of its customers, Midwest Energy concludes that their energy services program increases overall customer satisfaction.
8. The Kansas Weatherization Assistance Program (WAP), operated by the Kansas Housing Resources Corporation, provides housing improvements that increase energy efficiency in households with income up to 150% of the federal poverty level or 60% of the state median income, whichever is higher. WAP has historically been funded solely through federal funds (15% of the LIEAP funds from the U.S. Department of Energy). In Fiscal Year 2007, State of Kansas general funds were appropriated to supplement the program.

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<sup>6</sup> Based on 2006 International Code Council data base for Kansas: <http://www.iccsafe.org/government/> (accessed October 27, 2006).

<sup>7</sup> Midwest Energy, Inc. web site: <http://www.mwenergy.com/energyservices.html> (accessed October 23, 2006).

9. The Facilities Conservation Improvement Program (FCIP), administered by the Kansas Energy Office, is designed to streamline the acquisition and installation of energy conservation measures by public agencies. FCIP enables public agencies (e.g., the state, municipalities, counties, and schools) to locate qualified contractors and access financing for planning and implementing conservation projects quickly and easily. It facilitates tax-exempt financing and access to lower interest rates, making projects more economical and reducing the pay-back period. Public entities enter into an agreement with a private energy service company (ESCO). The ESCO identifies and evaluates energy-saving opportunities and recommends a package of improvements to be paid for through the projected energy savings. The ESCO guarantees that customer savings meet or exceed annual payments to cover all project costs—usually through a contract having a term of between ten and fifteen years. If actual savings don't materialize, falling below the annual payments made to cover the project cost, the ESCO pays the difference. To help ensure savings over the term of the contract, the ESCO offers staff training and long-term maintenance services.
10. In November 2006, the Kansas Housing Resources Corporation (KHRC) launched KEEP, a statewide loan program to promote energy conservation and reduce home heating costs. This new program allows low- and moderate-income homeowners to obtain low-interest loans to energy conservation home improvements. With \$2 million in State funding, the program funds half of the loan amount at zero interest (the other half is provided by Sunflower Bank), up to a maximum of \$7,500.
11. In August 2006, the Kansas Corporation Commission opened a generic investigation (Docket No. 07-GIME-116-GIV), *In the Matter of the General Investigation of Complying with Section 1252 of the Energy Policy Act of 2005 related to Smart Metering Technology*. This investigation focuses on the appropriateness of “utilities providing and installing time-based meters and communications devices,” and solicits comments from all jurisdictional electric utilities to the following questions:
  - What is the current status of smart metering technology used in service by Kansas utilities? What types of meters are used by different types of customers today?
  - What types of advanced metering and communication devices are available on the market today that could be used to assist utilities in demand response programs?
  - In terms of general policy, should Kansas utilities be required to begin offering smart metering technology to all customer classes, implement time-based rates, and initiate other broadly available demand response programs?

Additionally, the docket investigates the adoption of the following standards contained in the Public Utility Regulatory Policy Act revisions in the Energy Policy Act of 2005:

Standard 1. “...each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility’s costs of generating and purchasing electricity at the wholesale level. The time-based rate schedules shall enable the electric consumer to manage energy use and cost through advanced metering and communications technology.”

Standard 2. ...”Each electric utility subject to subparagraph (A) [Standard 1] shall provide each customer requesting a time-based meter capable of enabling the utility and customer to offer and receive such rate, respectively.”

In September 2006, the Kansas Corporation Commission opened a generic investigation (Docket No. 07-GIMX-247-GIV), *In the Matter of a General Investigation Regarding Energy Efficiency Programs*. Among the many questions raised about energy efficiency programs, this document contains the following questions about rate design—specifically, so-called decoupling:

May the Commission authorize a “decoupling” of revenue requirements from usage in order to remove disincentives for energy efficiency? (Section 9c, p. 6).

Is “decoupling” of revenue requirements from sales volumes a necessary or desirable mechanism to remove disincentives for energy efficiency programs? What are the pros and cons of such a mechanism? If decoupling is not implemented, is it appropriate and desirable to have an *ex post* mechanism to recover lost margins from sales not made due to energy efficiency investments? What are the pros and cons of this approach?” (Section 15d, p. 11).

12. Current state law, K.S.A. 66-177(e), permits the Kansas Corporation Commission to grant an additional 50 to 200 basis points on the utility’s allowed rate of return on utility investments in renewable energy and energy conservation and energy efficiency. This higher rate of return may be allowed if it is determined, after public hearing, that these programs or measures provide “a reduction in energy usage by its customers in a cost-effective manner.”
13. The U.S. Environmental Protection Agency and the Department of Energy have developed a National Action Plan for Energy Efficiency, the goal of which is “to

create a sustainable, aggressive national commitment to energy efficiency through gas and electric utilities, utility regulators, and partner organizations.”<sup>8</sup> Chief among the recommendations released in July 2006 are the recognition of energy efficiency as a high-priority energy resource and a long-term commitment to implementing energy efficiency through stable funding and the alignment of utility incentives with delivery of cost-effective energy efficiency programs.

The existing energy conservation policies and programs described above are limited in scope, in terms of their eligibility requirements, overall size, and geographic coverage. Therefore, the current set of programs does not, on its own, represent a comprehensive effort to achieve cost-effective energy conservation on a statewide basis.

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<sup>8</sup> EPA, National Action Plan for Energy Efficiency Web Site:  
<http://www.epa.gov/cleanrgy/actionplan/eeactionplan.htm> (accessed October 24, 2006).

## **Policy and Program Recommendations Requiring Legislative Action**

### **1. Establish Statewide Utility-operated Energy Education and Conservation Promotion Programs**

#### **a. Description**

As a first step towards increasing energy conservation in the state, the state's electric utilities would be required to provide all of their customers with information about energy conservation opportunities and options, including information on energy-related services that are locally available.

Key features of this proposal are (1) that all of the state's electric utilities participate; (2) that it is designed to increase general awareness and understanding of conservation opportunities; (3) that it is designed to further direct consumers so they may increase their understanding of particular conservation opportunities that are specific to their energy-use situations; (4) that separate "curricula" will be developed for the general public, K-12 students, local governments, as well as for the residential, commercial, and industrial utility classes, as well as the transportation sector; (5) that energy conservation information for residential customers will initially focus on the conservation measures listed in the Energy Efficiency Disclosure Form (see Attachment A), and (6) that the conduct of the utility-operated programs, including the release and content of all informational and promotional materials, will conform with standards developed by the Kansas Energy Office and advisory group (see Recommended Actions, below).

The program standards will include information about (1) how to access energy conservation services, such as energy audits, throughout the state; (2) financing energy conservation improvements; (3) existing government programs, such as the state's Weatherization Assistance Program and energy efficiency loan program (KEEP). Other details of the standards, including a consideration of relevant targets and goals, will be developed during the initial planning phase by the advisory group. The advisory group may form separate committees to develop the different "curricula."

Once the planning phase is completed and guidelines have been developed, jurisdictional utilities will be responsible for developing and delivering their own energy education and conservation promotion programs that comply with statewide guidelines.

Municipal utilities and cooperatives will also be responsible for delivering energy education and conservation promotion programs that comply with statewide guidelines. However, it will be the responsibility of the Kansas Energy Office, either by contracting with the state associations (Kansas

Electric Cooperatives and/or Kansas Municipal Utilities) or with a non-profit or educational entity, to develop programs for the municipal utilities and cooperatives that are consistent with the guidelines.

The proposed program does not require or prohibit utilities from developing additional energy efficiency and conservation services charged to customers on a fee-for-service basis.

In order to monitor the effectiveness of this program, measurable goals (defined as a percentage of energy consumption) should be established. The Kansas Energy Office will consult with the advisory group prior to adopting baseline data and goals, data-collection methodology, and reporting formats. Reports should be generated annually by the utilities and presented to the Kansas Energy Council, the Kansas Energy Office, and the Legislature.

#### **b. Recommended Actions**

##### **i) Responsible parties**

The Kansas Corporation Commission will have oversight on the implementation of these educational and promotional programs offered by jurisdictional utilities.

The Kansas Energy Office will work with the advisory group to develop program guidelines during the planning phase. During the implementation phase, the Kansas Energy Office will monitor the implementation of the programs developed by (or for) the municipal utilities and cooperatives.

All Kansas electric utilities will be required to provide, to all classes of customers, energy education and conservation promotion programs that are consistent with statewide program guidelines.

##### **ii) Legislative action**

Legislation is needed that requires all electric utilities to implement energy education and conservation promotion programs that are consistent with statewide standards and that also directs the Kansas Energy Office at the KCC to manage this program for the municipal utilities and cooperatives.

##### **iii) Implementation timeline**

The statewide programs will be implemented in two phases, with a separate budget for each phase. Phase 1, the planning phase, will



begin on July 1, 2007, and Phase 2, the implementation, will begin on July 1, 2008.

**iv) Budget requirements**

State funding of \$50,000 is estimated for the Phase 1 planning and development of the statewide program guidelines. The budget requirements for Phase 2 will be determined after the planning effort is completed. Costs incurred by the jurisdictional utilities may be reviewed by the KCC as part of the standard rate case procedures.

**v) Advisory group**

During Phase 1, an advisory group will work with the Kansas Energy Office to develop the statewide requirements and guidelines for the utility-operated energy education and conservation promotion programs. The advisory group will consist of (1) one representative from the municipal electric utilities, (2) one representative from the electric cooperatives, (3) two representatives from the investor-owned electric utilities, (4) two representatives from natural gas utilities (investor-owned and municipal), (5) one representative from the Citizens' Utility Ratepayer Board (CURB), (6) one representative from Kansas State University Engineering Extension, (7) two representatives from the KCC, (8) one representative from Kansas Housing Resources Corporation, and (9) one representative from the KU Transportation Center.

**c. Implications of Proposal**

***Pros***

- i) Increases utility customer awareness of opportunities for saving energy (and, thus, money), and of particular energy conservation measures that are available to them and the potential energy savings and net dollar savings they may deliver.
- ii) Increases utility customer awareness of the availability of energy conservation measures in their community.
- iii) Increases utility customer awareness of options for financing energy conservation improvements (or of accessing free services if they meet income guidelines).
- iv) May decrease statewide demand for electricity and natural gas, putting downward pressure on prices both now and in the future.
- v) May defer utility investments in new generation.

- vi) Provides emission reductions generally associated with adoption of energy conservation practices.
- vii) May increase utility customer satisfaction and goodwill toward the utility.

***Cons***

- i) Requires state funds.
- ii) Requires additional staffing resources at the Kansas Energy Office.

## **2. Amend Existing Laws Relating to Energy Efficiency Disclosure on New Homes**

### **a. Description**

To ensure Kansas homebuyers receive timely, useful information about the energy performance of new homes, K.S.A. 66-1227 and K.S.A. 66-1228 need to be amended in several significant ways.

Currently, K.S.A. 66-1228 requires the person selling a previously unoccupied new residential structure to disclose to the buyer or prospective buyer, prior to closing or upon request, information regarding the thermal efficiency of the structure (single or multifamily units, three floors and under). However, because such information is important to prospective buyers, the existing law needs to be amended to require that realtors provide this disclosure on all new houses at the time of listing, in addition to closing. Having energy efficiency information available to prospective buyers at listing is comparable to having mileage rating stickers when prospective buyers look at new cars.

In addition, K.S.A. 66-1228 needs to be amended to remove the disclosure form from the body of the law in order to allow the form to be revised by the Kansas Energy Office at the Kansas Corporation Commission. The form needs to be revised to (1) present the energy efficiency information in a quantitative and comparative way (see sample of revised disclosure form in Attachment A) and (2) to reflect latest national and international codes and standards.

K.S.A. 66-1227 adopts the International Energy Conservation Code 2003 (IECC 2003) as the applicable thermal efficiency standard for new commercial and industrial structures in Kansas and states that the “state corporation commission has no authority to adopt or enforce energy efficiency standards for residential, commercial, or industrial structures.” This law needs to be amended to (1) allow standards for commercial and industrial structures to be routinely updated through the Rules and Regulations process and (2) include a provision authorizing the Kansas Energy Office at the KCC to propose guidelines through the Rules and Regulations process for local residential energy efficiency standards (see administrative recommendation 1, below).

These amendments to K.S.A. 66-1227 and 66-1228 will ensure that Kansas consumers receive useful, quantitative data about the energy performance of new houses.

**b. Recommended Actions****i) Responsible parties**

Homebuilders cooperate with realtors to provide form at listing of new homes.

Kansas Energy Office staff will update form as needed to reflect current national and international standards.

**ii) Legislative action**

Amend K.S.A. 66-1228 and 66-1227, as described above.

**iii) Budget requirements**

No additional State funding required.

**iv) Implementation timeline**

Initiated upon effective date of enabling legislation.

**c. Implications of Proposal*****Pros***

- i) Provide timely, quantitative information about the energy efficiency of new housing.
- ii) Raises homebuyer awareness of energy efficiency issues.
- iii) Raises homebuilder awareness of energy efficiency issues.
- iv) Allows the form to be updated as deemed appropriate by KCC.

***Cons***

- i) Program success requires active participation of homebuilders and realtors without any provision for enforcement.

## **Policy and Program Recommendations Requiring Administrative Action**

### **1. Encourage Local Units of Government to Adopt Minimum Energy Efficiency Standards for New Construction**

The Kansas Energy Office (KEO) should conduct a statewide survey of local county and municipal ordinances to ascertain the current status of energy efficiency codes and code enforcement. If the KEO deems it is necessary, based on the results of the survey, then it would develop workshops and offer training on energy efficiency codes and practices.

The KEO would also work with a task force, consisting of representatives of local government and homebuilders, to develop model energy efficiency codes.

Municipalities and counties with building codes are encouraged to adopt ordinances that require new residences to meet minimum energy efficiency standards. Specifically, municipalities and counties could:

1. incorporate the 2003 or 2006 version of the International Energy Conservation Code (IECC) in their next code update;
2. require submission of the Kansas Energy Efficiency Disclosure Form (see Attachment A) in the application for building permits (single or multi-family, three floors and under) and specify that posting requirements of the disclosure form be similar to those for posting building permits;
3. incorporate energy efficiency items in their code inspections, to verify information provided on Kansas Energy Efficiency Disclosure Form;
4. provide information about the Kansas Energy Efficiency Disclosure Form as a reference for homebuyers, homebuilders, and real estate agents; and/or
5. adopt ordinances that make issuance of an occupancy permit contingent upon meeting minimum energy efficiency standards.

More widespread adoption of energy efficiency codes for residential buildings will not only improve the energy efficiency of new housing stock, but should also provide homeowners with significantly lower energy bills (which may be offset by possibly higher home sale prices). Local codes will also raise homebuyer and homebuilder awareness of energy efficiency issues.

## 2. Encourage Utility Implementation of PAYS® (Pay As You Save) and PAYS-type Pilot Programs

Kansas utilities are encouraged to implement pilot programs to demonstrate the effectiveness of financing energy conservation improvements through a PAYS® and PAYS-type financing system.

The Pay-As-You-Save, or PAYS®, system is designed to give building owners and tenants a way to finance the purchase and installation of energy conservation measures with no upfront expense or direct debt obligation.<sup>9</sup> PAYS® was first piloted by two New Hampshire utilities in 2003.<sup>10</sup> In its essence, PAYS® allows the participant to pay for the energy conservation improvements through an additional, tariffed charge on the participant's utility bill. The PAYS® charge is based on the useful life of and savings attributable to specific energy efficiency measures (not to exceed 75% of the expected savings), and appears on monthly utility bills for a prescribed period of time (not to exceed 75% of the life of the measure). The PAYS® charge is specifically designed to stay with the meter for the duration of the repayment period. If the participant moves, the PAYS® charge is passed on to the next owner/tenant, provided transfer of ownership/tenancy occurs prior to the end of the repayment period. To qualify for PAYS®, a qualified utility-sponsored energy audit must be performed and all proposed conservation projects are subject to inspection prior to initiation of PAYS® financing. Only permanently affixed conservation measures (e.g., insulation, HVAC, windows and doors) qualify for PAYS® funding. PAYS®-based tariffs would require regulatory approval.

A PAYS-type system could require the same standards for evaluating and financing as PAYS®, but the payments would be tied to the participating customer, not to the meter. Furthermore, rather than being a “banker,” the utility's role could be that of a conservation loan facilitator. To facilitate loans through a PAYS-type pilot program, the utility would probably engage in two basic steps. In the first step, the utility would perform (or facilitate the performance of) an energy audit. The audit would include, in addition to the performance of standard audit tests and inspections, the development of a customer-specific “Energy Action Plan,” which estimates dollar savings and the costs to achieve those savings; thus, identifying conservation measures that are likely to be cost-effective for that customer to install. The Plan would also contain “bid sheets” detailing installation costs, along with a list of utility-approved installation

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<sup>9</sup> PAYS web site: <http://www.paysamerica.org/index.html>.

<sup>10</sup> GDS Associates, Inc., 2003, *Process Evaluation of the Pilot “Pay As You Save” (PAYS) Energy Efficiency Program: As delivered by the New Hampshire Electric Cooperative and Public Service Company of New Hampshire*,” December 2003 (<http://www.gdsassociates.com>).

contractors. In the second step, the utility would offer its customers a prearranged credit program through the utility's bank (or a participating bank) and represent to the bank loan officer the net savings that are likely to result from installing the proposed energy conservation improvements. Qualified customers can choose to repay the loan either by (1) making payments directly to the bank, or (2) making loan payments through the monthly utility bill (possibly using the PAYS® method for setting the size and term of the loan repayment). In the PAYS-type pilot, all customers (with the exception of low-income customers) would pay the full cost of the energy audit through the audit fee. Options for paying the audit fee include (1) direct payment by the customer at the conclusion of the audit (or possibly at a later date), (2) payment through a levelized monthly charge appearing on the customer's monthly bill, perhaps over a 36-month period, and (3) payment through the inclusion of the audit fee as part of the energy conservation loan principle.

Both the PAYS® and the PAYS-type pilot programs should be linked to the State's new low-income energy efficiency loan fund and the Weatherization Assistance Program, both operated by the Kansas Housing Resources Corporation. Depending on their income levels, utility customers who don't qualify for financing under the bank's underwriting rules may be eligible for a low-interest loan or for free weatherization assistance.

Small pilot programs would test the effectiveness of these promising financing systems and allow policy makers and utilities to evaluate for future, possibly broader applications. Utilities would be encouraged to initiate pilot programs by June 2007.

**Policy and Program Recommendations Requiring Action by the Kansas Corporation Commission**

(none)



**Policy and Program Recommendations Requiring Ongoing Study****1. Monitor the Kansas Corporation Commission's Ongoing Energy Efficiency Investigations to Determine Need for Further Investigation of Rate Design and Other Energy Efficiency Issues**

The Kansas Corporation Commission due, in part, to the discussions and early draft recommendations of the Kansas Energy Council, opened two generic dockets in the fall of 2006 to examine a wide range of energy conservation and efficiency topics, including rate design and whether the KCC has the authority to require utilities to provide energy efficiency programs (see discussion of Docket Nos. 07-GIME-116-GIV and 07-GMIX-247-GIV under "Existing Policies and Programs). Because these topics are of ongoing interest to the Council, the KEC will monitor the KCC's findings, decisions, and subsequent actions with respect to the questions raised in these dockets to determine whether further investigation may be warranted.

**Note:** Because of the wide range of questions raised in these dockets, the KCC is encouraged to render determinations on the separate topics, on or before October 1, 2007, in order to allow time for the Council to prepare legislative recommendations for the 2008 session.

ATTACHMENT A:

# KANSAS ENERGY EFFICIENCY DISCLOSURE

As required by KSA 66-1228

Kansas law requires the person building or selling a previously unoccupied new residential structure to disclose to the buyer or a prospective buyer, at listing and prior to closing, information regarding the thermal efficiency of the structure (single or multifamily units, three floors and under).

Common Address or Legal Description of Residence:

**Part 1: Builder *must* describe the following energy efficiency elements of this house:**

	<u>Actual Value</u>	<u>Energy Star*</u>
<b>Wall Insulation R-Value</b>	_____	18
<b>Attic Insulation R-Value</b>	_____	42
<b>Foundation Insulation R-Value</b>		
Basement Walls	_____	10
Crawlspace Walls	_____	15
Slab-on-Grade	_____	8
<b>Floors over Unheated Spaces R-Value</b>	_____	30
<b>Window U-Value</b>	_____	.34
<b>Water Heater</b>		
Gas or Propane (Energy Factor)	_____	.60
Electric (Energy Factor)	_____	.92
<b>Heating and Cooling Equipment</b>		
Warm-Air Furnace (AFUE)	_____	.93
Air Conditioner or Heat Pump - Cooling (SEER)	_____	14
Air-Source Heat Pump (HSPF)	_____	8.5
Ground-Loop Heat Pump – Heating (COP)	_____	3.9
Ground-Water Heat Pump – Cooling (EER)	_____	22
Ground-Water Heat Pump – Heating (COP)	_____	4.4

**Part 2: Builder *may* provide the following additional information about this house:**

\_\_\_\_\_ This residence has been/will be built to meet the energy-efficiency standards of the International Energy Conservation Code of 2006 (IECC 2006).

\_\_\_\_\_ This residence has received a Home Energy Rating (HERS) index score of 100 or less based on an energy audit performed in accordance with the Mortgage Industry National Home Energy Rating Systems Standards (July 1, 2006) by a rater certified by Residential Energy Services Network (RESNET).

**At Listing:**

Seller Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Seller Name and Address: \_\_\_\_\_

**At Closing:**

Buyer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Buyer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\*See reverse for more information on existing standards and explanation of abbreviations.

## ATTACHMENT A:

**R-value = Thermal Resistance Rating** of insulation materials. The higher the R-value, the better the material resists heat flow (i.e., the better it insulates).

**U-value = Heat Loss Rating** of windows. The lower the U-value, the less the window loses heat (i.e., the better it prevents heat loss).

**Equipment Performance Ratings** (the higher the number, the more efficient the equipment)

**AFUE = Annual Fuel Utilization Efficiency:** used to rate gas or propane warm-air furnaces and small boilers.

**SEER = Seasonal Energy Efficiency Ratio:** performance indicator for residential air conditioners and air source heat pumps.

**HSPF = Heating Seasonal Performance Factor:** measures heating performance of air-source heat pumps.

**EER = Energy Efficiency Ratio:** used to rate window air conditioners and ground-loop or ground-water heat pumps in the cooling mode.

**COP = Coefficient of Performance:** used to rate ground-loop or ground-water heat pumps in the heating mode.

**Energy Star** qualified homes are at least 15% more energy efficient than homes built to the 2006 International Energy Conservation Code (IECC). Energy Star is a joint program of the U.S. Environmental Protection Agency and Department of Energy.

**The International Energy Conservation Code (IECC)**, developed by the International Code Council, sets standards for energy efficiency in homes and commercial and industrial buildings. It is revised on a three-year cycle, with a supplement issue midway through each cycle.

**The HERS Index** is a scoring system established by the Residential Energy Services Network (RESNET) in which a home built to the specifications of the HERS Reference Home (based on the 2006 International Energy Conservation Code) scores a HERS Index of 100, while a net zero energy home scores a HERS Index of 0. The lower the score, the more energy efficient a home is in comparison to the HERS Reference Home. Each 1-point decrease in the HERS Index corresponds to a 1% reduction in energy consumption compared to the HERS Reference Home. Thus a home with a HERS Index of 85 is 15% more energy efficient than the HERS Reference Home and a home with a HERS Index of 80 is 20% more energy efficient.

**RESNET Standards** ensure that accurate and consistent home energy ratings are performed by accredited home energy rating systems nationwide; increase the credibility of the rating systems with the mortgage finance industry; and promote voluntary participation in an objective, cost-effective, sustainable home energy rating process. This accreditation process will be used by the mortgage industry to accept home energy ratings and by the states to assure accurate, independent information upon which a state may recognize the home energy ratings as a compliance method for state building energy codes; as qualification for energy programs designed to reach specific energy saving goals; and as a way to provide its housing market the ability to differentiate residences based on their energy efficiency. The Mortgage Industry National Home Energy Rating Systems Standards (July 1, 2006) can be found at [http://www.natresnet.org/standards/mortgage/RESNET\\_Standards-2006.pdf](http://www.natresnet.org/standards/mortgage/RESNET_Standards-2006.pdf).